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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,376	07/14/2005	Masahiro Sakurada	124703	7788

25944 7590 12/28/2007

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EXAMINER	
SCHILLINGER, LAURA M	
ART UNIT	**PAPER NUMBER**
2813	

MAIL DATE	DELIVERY MODE
12/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/542,376	SAKURADA ET AL.	
	Examiner	Art Unit	
	Laura M. Schillinger	2813	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 November 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *7-16* is/are pending in the application.

4a) Of the above claim(s) *7-14* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *15 and 16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/14/05, 5/19/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of claims 15-16 in the reply filed on 11/5/07 is acknowledged. The traversal is on the ground(s) that the search for both the method and device claims would not be burdensome to the Examiner. This is not found persuasive because the method and device claims are two separate statutory classes of invention which are separately classified and would therefore constitute a burdensome search.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (hereinafter referred to as "APA") in further view of Sakurada et al (JP 2000-403127).

The following claimed limitations are taught by APA and the citations referred to are found within Applicant's own specification:

15. (New) A method for producing an SO1 wafer comprising at least the steps of:

forming an oxide film at least on one of a base wafer and a bond wafer respectively consisting of silicon single crystal (page 1, para 1 through page 2, para 2),

implanting ions into the bond wafer to form an ion- implanted layer(page 1, para 1 through page 2, para 2),

bonding the surface of the ion-implanted side of the bond wafer and the base wafer via the oxide film (page1, para 1), and

delaminating the bond wafer at the ion- implanted layer as a boundary (page 1, para 2),

wherein the base wafer is used, which is formed of silicon single crystal grown by Czochralski method (page 2, para 2), and

the whole surface of the base wafer is within N region formed at lower speed than OSF region generated in a ring shape when grown with gradually decreasing pulling rate from high speed to low speed (page 3, para 2 through page 4, para 2- see especially page 4, para 2- lines: 7-14), or

the whole surface of the base wafer is within a region formed at lower speed than OSF region generated in a ring shape when grown with gradually decreasing pulling rate from high speed to low speed (the N region- page 3, para 2 through page 4, para 2- see especially page 4, para 2- lines: 7-14), and

includes I region containing dislocation cluster due to interstitial silicon (page 4, para 2).

However APA fails to teach Applicant's additional claimed limitation the whole surface of the base wafer is within N region formed at lower speed than OSF region generated in a ring shape when grown with gradually decreasing pulling rate from high speed to low speed **and doesn't include defect region detected by Cu deposition method.**

Sakurada et al (teaches a similar method of manufacturing a silicon single crystal wafer and silicon single crystal are characterized in that in the silicon single crystal wafer frown by the CZ method, in N region outside of OSF ring generated in ring state at the time of heat oxidizing process for all surfaces of the wafer, **no defective region is existing which is to be detected by Cu deposition (Abs, SOLUTION).**

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify APA to include Sakurada's teachings preventing a defect region detected by Cu deposition method because as Sakurada teaches, such a method improves electric performance (Abs., Problem to be Solved).

16. (New) The method for producing an SOl wafer according to claim 15, wherein the bond wafer is used, which is formed of silicon single crystal grown by Czochralski method (page 2, para 2), and of which the whole surface is within N region formed at lower speed than OSF region generated in a ring shape when grown with gradually decreasing pulling rate from high speed to low speed (page 3, para 2 through page 4, para 2- see especially page 4, para 2- lines: 7-14).

However APA fails to teach Applicant's additional claimed limitation the whole surface of the base wafer is within N region formed at lower speed than OSF region generated in a ring shape

when grown with gradually decreasing pulling rate from high speed to low speed **and doesn't include defect region detected by Cu deposition method.**

Sakurada et al (teaches a similar method of manufacturing a silicon single crystal wafer and silicon single crystal are characterized in that in the silicon single crystal wafer frown by the CZ method, in N region outside of OSF ring generated in ring state at the time of heat oxidizing process for all surfaces of the wafer, **no defective region is existing which is to be detected by Cu deposition (Abs, SOLUTION).**

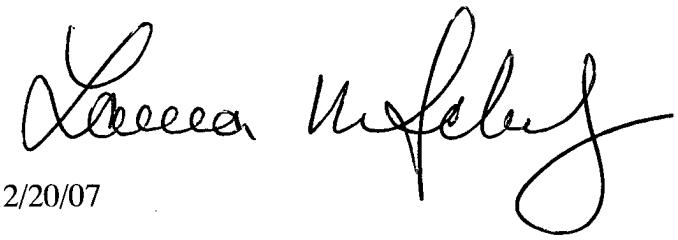
It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify APA to include Sakurada's teachings preventing a defect region detected by Cu deposition method because as Sakurada teaches, such a method improves electric performance (Abs., Problem to be Solved).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura M. Schillinger whose telephone number is (571) 272-1697. The examiner can normally be reached on M-T, R-F 7:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl W. Whitehead, Jr. can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Laura M Schillinger
Primary Examiner
Art Unit 2813

12/20/07